## CHAPTER V.

### NAVAL ATTACK ON CHARLESTON.

On April 2, 1863, the Rear-Admiral left Port Royal to join the "ironclads," as the monitors were styled, at North Edisto, and on the morning of the 5th left for Charleston Bar with all of them in tow of suitable vessels. As previously arranged, on arrival, the Keokuk, aided by Captain Boutelle and Master Platt of the Coast Survey, sounded and buoyed the bar of the main ship channel, supported by the monitors Patapsco and Catskill. This was soon accomplished, and before dark these two monitors anchored within. At high tide on the following morning, the Admiral came in on board of the New Ironsides, Commodore Thomas Turner, and was followed by the five monitors yet outside, and by the Keokuk. He intended to proceed the same day to the attack of Fort Sumter, and thence to the city of Charleston, but the weather became so hazy that the ranges could not be seen and the pilots refused to go farther. The state of the atmosphere prevented a satisfactory examination of an earthwork, known afterward as Fort Wagner, on Morris Island, distant about two thousand five hundred yards from Sumter, of the batteries on Cumming's Point, and of the heavy earthworks flanking Moultrie.

The order of battle was "line ahead" as follows: The Weehawken, Captain John Rodgers, with a raft on the bows

to explode torpedoes,[1] led the line; the Passaic, Captain Percival Drayton; the Montauk, Captain John L. Worden; the Patapsco, Commander Daniel Ammen; the New Ironsides, Commodore Thomas Turner (as flag-ship), followed by the Catskill, Commander George W. Rodgers; the Nantucket, Commander D. M. Fairfax; the Nahant, Commander John Downes, and the Keokuk, Commander A. C. Rhind.

The vessels were ordered to pass without returning the fire from batteries on Morris Island; when within easy range of Fort Sumter they were to open upon it, and take position to the north and west, at a distance of eight hundred yards, firing low, and at the centre embrasure. The necessity for precision of fire was enjoined. Vessels were to be prepared to render assistance to each other as far as possible, and a special code of signals was arranged, that could be operated on board of the ironclads.

Noon on the following day (7th) was the earliest hour that the pilots were willing to move. Signal was made, and the vessels got under way. The Weehawken in weighing anchor fouled the torpedo grapnels attached to the raft before mentioned, on her bows; this delayed movement until 1.15. The vessels then proceeded up in line ahead at distances varying a good deal, but intended to be one hundred yards apart; they steered very badly if obliged to stop the engines, sheering every way, and the raft on the bow of the Weehawken delayed her, and caused wild steering along the whole line, so it was about 2.50 P.M. when she was opened on by Moultrie, followed at once by Sumter, and all of the bat-

[1] It was formed of very heavy timbers crossing at right angles, bolted together, about fifty feet in length, shaped not unlike a boot-jack, the bows of the vessel propelling within the notch. The after-ends or jaws of the raft were secured by chains to the bow of the vessel. The wave-motion acting on this cumbrous mass was quite different from that of the monitor. It proved to be a battering ram, and loosened the armor plating on the bows of the Weehawken.

teries within effective range. The Weehawken was then somewhat above Fort Wagner. At about 3.05 she opened fire on Fort Sumter, followed by the other monitors, at or before they arrived at the same point, the Patapsco at that time employing a 150-pounder rifle, at the angle of Sumter that was in face. From Wagner up, several buoys of different colors were seen; the vessels passed between them and Morris Island, but nor far from them, perhaps within one hundred and fifty yards. It was observed that the different vessels, in bringing the buoys in range with Moultrie or batteries on that shore, received in turn a heavy fire, and it was supposed probable that they marked torpedoes; they certainly served to indicate distance, and the ranges of the guns had been practically established on them, which greatly increased the accuracy of fire from the forts as the vessels passed. As the narrow part of the channel was approached, the flood tide became strong, setting the vessels in, and made them additionally unmanageable.

Soon after getting within the heavy fire of the batteries, the Weehawken signalled obstructions in her vicinity, and previous to that a torpedo had exploded close to her. Captain Rodgers' report states: "We approached very close to the obstructions extending from Fort Sumter to Fort Moultrie—as near, indeed, as I could get without running upon them. They were marked by rows of casks very near together. To the eye they appeared almost to touch one another, and there was more than one line of them."

"The appearance was so formidable that, upon deliberate judgment, I thought it right not to entangle the vessel in obstructions which I did not think we could have passed through, and in which we should have been caught. Beyond these, piles were seen between Castle Pinckney and the middle ground."

"A torpedo exploded under us or very near to us; it lifted the vessel a little, but I am unable to perceive that it has done us any damage. I have no accident to report."

After approaching the obstructions as above described, the Weehawken's bow was turned to seaward, in order to prevent being swept upon the obstructions by a strong flood tide then running, and steaming a few hundred feet to the southward enabled the Passaic to turn in her wake, the Montauk following her.

The working of the guns of the Weehawken was entirely satisfactory. Eleven XV-inch, and fifteen XI-inch shells were fired; she was struck fifty-three times in forty minutes; the missiles were formidable; two or three of them struck the side armor near the same place and so broke the plates that they remained only in fragments, the wood backing being exposed. The deck was pierced so as to make a hole through which water ran into the vessel. Thirty-six bolts were broken in the turret and many in the pilot-house, the number not ascertained, as they were concealed by an iron lining. At one time the turret revolved with difficulty, having been wedged by a fragment of a shell between its top and the pilot-house.

From the Passaic, next in line, buoys of various descriptions were observed and also the torpedo that burst near the bow of the Weehawken. When opposite the centre of the northeast face of Sumter, the vessel was near some obstructions that seemed to extend from Sumter to Moultrie. At the moment of the fourth discharge from the XI-inch gun the Passaic was struck by two heavy shot in the lower part of the turret, which bulged in the plates and beams, and forced the rails together upon which the gun was worked, disabling it for several hours. Soon after, a portion of the brass ring surrounding the turret was broken, and temporarily

impeded revolving the turret. A very heavy rifle-shot struck the upper edge of the turret, broke all of the plates forming it, then glancing, struck the pilot-house above, indenting it two and a half inches nearly the whole length of the shot. It disarranged the top of the pilot-house and lifted one side of it three inches. The vessel was struck thirty-five times; several bolt-heads were knocked off and thrown into the pilot-house and turret. The vessel fired four XI-inch and nine XV-inch shells. There was great difficulty in managing the vessel and keeping clear of her consorts, owing to the limited range of vision from the holes in the pilot-house and to the dense smoke.

The Montauk experienced difficulty in maneuvering in the narrow and uncertain channel, with the limited means of vision, under the rapid and concentrated fire of the enemy. The vessel was struck fourteen times without receiving material injury. She fired ten XV-inch cored shot, sixteen solid XI-inch shot, and one shell.

The Patapsco opened fire with 150-pounder rifle when within thirteen hundred yards of Sumter, and when within eleven hundred yards with the XV-inch gun. On the fifth discharge the cap-square bolts of the rifle gave way, disabling that gun for two hours.

The Montauk, next ahead, following the head of the line, turned seaward. At that time several rows of buoys were observed above and near, and further within the harbor, a row of piles. Endeavoring to turn a step's length short of the Montauk's wake, the headway of the Patapsco ceased, and the vessel no longer obeyed the helm. She was backed, and got off, having been stationary long enough to afford the enemy an excellent opportunity, which was availed of, for delivering a heavy concentrated fire. At this time she was supposed to be six hundred yards from Sumter and double that

distance from Moultrie. A XV-inch shell fired at Sumter was watched until it struck on the northeast face; the fort was covered with a mass of dust from the bursting shell, and the effect upon the masonry was plainly visible.

The opinion was expressed by her commander that a want of vision from the pilot-house was one of the most serious defects of that class of vessel, making it impossible to fight them advantageously, to avoid dangers, or to make a satisfactory reconnoissance. Owing to the breaking of the cap-square bolts of the rifle, that gun delivered only five shells; the XV-inch fired the same number. The vessel was struck forty-seven times. Forty bolts of the smoke-stack were broken and a chain afterward put around it for security. The vessel was not disabled, but injuries were received which, if multiplied, would have disabled her.

The Catskill reports that at 2.50 the forts and batteries opened on the head of the line. The flag-ship (New Ironsides) becoming unmanageable from shoal water and strong tide, the Catskill passed her, and at 3.35 the first shot struck her. She approached within six hundred yards of Sumter, and one of her XV-inch shells apparently dismounted a barbette gun. The cross fire to which she was subjected was most severe. The same obstructions reported by the four preceding vessels were observed. Surprise was expressed that the vessel suffered so much injury in so short a time. She was struck twenty times; one shot forward broke the deck-plates and deck-planking, and drove down the stanchion sustaining the beam, causing the deck to leak. She fired fifteen XI-inch and eleven XV-inch shells. No complaint as to the working of the turret or the battery.

The commander of the Nantucket, next in line, made the same general observations. The New Ironsides having sig-

nalled to "disregard motions of flag ship," he followed the Catskill. When within seven hundred and fifty yards of Sumter he opened fire on it, and for forty-five or fifty minutes was under the fire of three forts, which he describes as "terrific." The effect of the fire of the vessel on the fort was not so observable as that of the enemy on the vessel. After the third discharge the port stopper of the XV-inch gun was jammed, several heavy shot having driven in the plating. The XI-inch gun was fired twelve times. The vessel was struck fifty-one times. During the action the turret was jammed; six or seven nut-heads driven off had fallen inside and rendered it necessary to key up the turret to enable it to revolve.

A number of side-plates were started, so that another shot would probably have broken them off. One rifle-shot was driven through the armor into the wood, and one deck-plate was started from a blow on the side armor. Other serious injuries were named.

The Nahant reports that, following in line of battle, the vessel became hotly engaged. She soon began to suffer from the terrible fire to which she was subjected. At 4.30 the turret, having become jammed from the effects of three shots, refused to turn. One of these shot broke off a piece of iron in the interior weighing seventy-eight pounds, and throwing it violently across the house bent and disarranged the steering gear. Bolt-heads (nuts from the bolts) flying from the inside of the pilot-house struck down the pilot, and fatally injured the helmsman. The commanding officer was the only person in the pilot-house not senseless from injuries. The preventer steering gear was got in working order, and after repeated futile efforts to train the guns on Sumter, the vessel was headed out, the other vessels withdrawing under signal at the same time.

The vessel was struck thirty-six times, one man was fatally injured, two others severely, and four others slightly, all by flying bolts or other fragments inside the pilot-house and turret. Several of the plates on the side armor were badly broken, and at one place, where two shots had struck near each other, the plating was partly stripped from the wood, the backing broken in, and the edging of deck-plates started up and rolled back in places. On the port quarter and side the plating was deeply indented and started from the side to the stern. The deck had two very damaging shots, one near the propeller well, quite shattering the plate and starting twenty-five bolts; another starting the plate and twenty bolts. The smoke-stack received three shots; one pierced the armor, making a hole fifteen inches long and nine broad, displacing the grating inside, and breaking seven bolts. The turret received nine shots; fifty-six bolts were perceptibly broken, the nuts stripped from the inside, and the bolts themselves protruded almost their length; some of them, in fact, having actually been forced out, were found lying on the deck; doubtless many others were broken that had not then been detected, as some bolts seemingly sound were afterward found loosened. One shot struck the upper part of the turret, breaking through every plate, parting some of them in two, three, and four places. The pilot-house bore marks of six shots, three of XI-inch diameter, twenty-one bolts were broken and others started, and the plates were much started; in the opinion of the commanding officer, a few more such shot would have demolished it. One of the missiles at the base broke through every plate, and evidently nearly penetrated.

During the action the Nahant fired seven XV-inch and eight XI-inch projectiles. It was not until 5 P.M. of the next day that the turret was sufficiently cleared to be turned,

although a corps of skilful workmen under able supervision were engaged at it.

The commanding officer of the Keokuk states that at 3.20, the flag-ship having made signal to disregard her motions, he found it necessary to run ahead of the Nahant to avoid getting foul of her in a narrow channel and strong tide. In consequence, he was forced to take a position slightly in advance of the leading vessel of the line, which brought the Keokuk under a concentrated fire between Sumter and Moultrie, about five hundred and fifty yards from the latter. This position was maintained about thirty minutes, during which time the vessel was struck ninety times. Nineteen shots pierced her at and just below the water-line. The turrets (casemates) were pierced in many places and one of the forward shutters shot away; in short, the vessel was completely riddled.

Finding it impossible to keep her afloat many minutes more under such an extraordinary fire, at 4.40 she was reluctantly withdrawn from action. The gun-carriage of the forward turret was disabled, and so many of the crew of the after gun wounded as to disable that gun. She was anchored out of range of the fire of the enemy and kept afloat during the night, as the water was smooth. At daylight the breeze sprung up, the leakage increased, and it was apparent the vessel must soon go down. Signal was made, assistance arrived, and an endeavor to get the head of the vessel around to tow her into shoaler water, but in that effort she filled rapidly and at 7.20 A.M. of the 8th sunk, her smoke-stack alone remaining partly above water. The wounded had been put on board of a tug a few minutes before the vessel sunk. The casualties were 16 seriously, and as many more slightly wounded.

Commodore Turner, commanding the flag-ship, states that

the pilot-house being insufficient to hold more persons than were required by the Admiral, he had taken personal charge of the battery of the Ironsides. By sounding it was found that the vessel at times was only one foot clear of the bottom. A shot striking the forward facing of a port shutter knocked it off. The damage done to the ship from the fire of the enemy was not material, and the opinion was expressed that at the distance of 1,000 yards the armor plating would prove invulnerable to such shot as were fired at the vessel. He expressed great admiration of the conduct of officers and men, and would fall short of his duty if he omitted to present to especial notice Lieutenant-Commander George E. Belknap, the executive officer. It is proper to note the fact that without exception the commanding officers of all of the vessels engaged spoke in the highest terms of those under their command. The names, which may be seen in the official reports, are omitted for lack of space and fear of taxing the patience of the reader.

Rear-Admiral Dupont, in his several reports to the Department, states that he moved in line of battle as before given, in the New Ironsides, with seven ironclad monitors and the iron-plated vessel Keokuk, and attacked Fort Sumter, intending to pass it and commence action on the northwest face, in accordance with his order of battle. The heavy fire received from Sumter and Moultrie and the nature of the obstructions compelled the attack from outside, which was fierce and obstinate, and the gallantry of the officers and men was conspicuous.

The endeavors of the Admiral in the pilot-house of the New Ironsides to bring the vessel into such close action as he desired were not successful; in a rapid current and narrow channel the vessel became partly unmanageable, and was twice anchored to prevent grounding, and once on ac-

count of a collision with two of the monitors. She did not get nearer to Fort Sumter than 1,000 yards.[1]

Owing to the condition of the tide and unavoidable accidents, the vessels were not engaged until late in the day, and toward evening, finding no impression made upon the fort, signal was given for the vessels to withdraw, with the intention of renewing the attack the following morning. The commanders of the monitors came on board during the evening, and stated verbally the injuries the vessels had received, when without hesitation the Admiral determined not to renew the attack, as in his judgment it would have converted a failure into a disaster. He stated that in his opinion Charleston could not be taken by a purely naval attack, and the army could not give co-operation. Had he succeeded in entering the harbor, he would have had 1,200 men, with 32 guns; but five of the seven ironclads were wholly or partially disabled after a brief engagement. He had alluded above only to Forts Sumter and Moultrie, but the vessels were also exposed to the fire of the batteries on Cummings Point, Mount Pleasant, the Redan, and Fort Beauregard.

In a more detailed report to the Department, dated April 15th, Admiral Dupont gives with particularity the fire delivered by the vessels engaged and the injuries sustained by them, and adds, that in his belief any attempt to pass through the obstructions referred to would have entangled the vessels and held them under the most severe fire of heavy ordnance that had ever been delivered, and while it was barely possible that some vessels might have forced their way through, it would only have been to be again impeded

[1] Confederate accounts state that no monitor approached nearer than 600 yards to the rope obstructions, which is probably an error, as they turned in line, and at such distance as in a strong tide seemed necessary to clear them. They estimated the nearest approach of the Ironsides at 1,800 yards.

by other and more formidable obstructions and to encounter other powerful batteries with which the whole harbor of Charleston had been lined. He says that the slowness of our fire and our inability to occupy any batteries we might silence are disadvantages of the gravest character, and until the outer forts shall have been taken, the army cannot enter the harbor or afford assistance. A want of success, however, will not prevent him from bringing to the notice of the Department the gallant officers and men who took part in this desperate conflict.

After naming the officers and the vessels they commanded, he says: "They did everything that the utmost gallantry and skill could accomplish in the management of their untried vessels." These commanding officers had long been known to him; many of them had served in the squadron before, and were present at the capture of the Port Royal forts; they were men of the highest professional capacity and courage, and fully sustained their reputations, coming up to his requirements. He commended them and their reports, which speak of those under them, to the consideration of the Department.

He then names in the highest terms Commander C. R. P. Rodgers, Lieutenant S. W. Preston, Lieutenant A. S. Mackenzie, and Ensign M. L. Johnson, who were on his staff or serving immediately under his personal observation.

The result of the attack was mortifying to all of the officers and men engaged in it. Had any loss of life been regarded as likely to render another attempt successful, there would have been few indeed who would not have desired it. The opinion before the attack was general, and was fully shared in by the writer, that whatever might be the loss in men and vessels, blown up by torpedoes or otherwise destroyed (and such losses were supposed probable), at all

events Fort Sumter would be reduced to a pile of ruins before the sun went down. The damage done to the forts by the very small number of projectiles fired by the vessels, although not known at the time to the assailants, was so considerable as to cause the enemy to fill nearly all of the casemates with sand, and this work was begun and carried on vigorously the very night after the bombardment. (See Appendix A for effect of shells, as given in Confederate records.)

The damage inflicted on the vessels shows that they were incapable of enduring heavy blows sufficiently long to effect the destruction of Sumter, as they were situated, or as it was supposed possible to place them. There was considerable swell even between the forts at the time of the attack, and the flood tide ran strong and irregularly, which added to the embarrassment. Afloat as elsewhere leeks have to be eaten sometimes, whether liked or not, as an old proverb has it.

An examination of the chart of Charleston Harbor, with its batteries and obstructions of various kinds, as shown in 1865, and the experience gained subsequent to the attack (bearing in mind, too, the condition of the batteries of the vessels on the 7th of April), would point rather to the probability of disaster than to success, had an attempt been made to enter.

The reader has been informed of the strength of the attacking force in guns and in material resistance, and the failure of many of the guns to operate when they were most needed. A part of the defences at that time consisted of seventy-six guns of large calibre, which bore over the area occupied for a time by the vessels attacking.

H. R. Ex. Doc. No. 69, Thirty-eighth Congress, First Session, page 85 (Report on Armored Vessels), states: "There was a cylinder torpedo off Fort Wagner under charge of Mr.

Langdon Cheves, who endeavored to explode it for ten minutes. He could not have placed the Ironsides more directly over the torpedo, but the confounded thing, as is usual with them, would not go off when it was wanted." The character of the defences of Charleston and the ability of the attacking force will appear more fully in the closing pages relating to operations on that coast.

The considerations that were operative in the mind of the flag-officer are given in his report of April 15th. He says: "I had hoped that the endurance of the ironclads would have enabled them to have borne any weight of fire to which they might have been exposed; but when I found that so large a portion of them were wholly or one-half disabled by less than an hour's engagement, before attempting to remove [overcome] the obstructions, or testing the power of the torpedoes, I was convinced that persistence in the attack would result in the loss of the greater portion of the ironclad fleet, and in leaving many of them inside the harbor, to fall into the hands of the enemy."

On the withdrawal of the ironclads at 5 P.M., April 7th, the flag-officer had not even a suspicion that he would not resume operations the following morning. The grave injuries sustained by the vessels in aggressive power restrained him, such as no loss of life, had it occurred, would have done.

On the evening of the attack the flag-officer received a letter, as follows:

CONFIDENTIAL.

NAVY DEPARTMENT, April 2, 1863.

SIR—The exigencies of the public service are so pressing in the Gulf that the Department directs you to send all the ironclads that are in a fit condition to move, after your present attack upon Charleston, directly to New Orleans, reserving to yourself only two.

Very respectfully,

GIDEON WELLES.

Of the same date is the following unofficial letter from the Assistant Secretary of the Navy: "Matters are at a standstill on the Mississippi River, and the President was with difficulty restrained from sending off Hunter and all the ironclads directly to New Orleans, the opening of the Mississippi being the principal object to be obtained. It is, however, arranged, as you will see by to-day's order, that you are to send all the ironclads that survive the attack upon Charleston immediately to New Orleans, reserving for your squadron only two. We must abandon all other operations on the coast where ironclads are necessary to a future time. We cannot clear the Mississippi River without ironclads, and as all the supplies come down the Red River, that stretch of the river must be in our possession. This plan has been agreed upon after mature consideration, and seems to be imperative."

On the night after the attack officers on General Hunter's staff were on board of the Ironsides with the proposition for the flag-officer to co-operate with General Hunter in the reduction of Morris Island, which, for reasons quite obvious, could not then be entertained.

In a reply to a very complimentary letter received from General Hunter at this time, the Admiral says: "I feel very comfortable, General, for the reason that a merciful Providence permitted me to have a *failure* instead of a *disaster*, and if I had ever entertained for a moment any misgiving as to my course, the despatches just handed me would remove it."

The following day, in a note to General Hunter, he says: "I find the ships so much damaged during this short engagement as to force me to the conviction that they could not endure the fire to which they would be exposed long enough to destroy Sumter or reach Charleston. I am now satisfied that

the place cannot be taken by a purely naval attack, and am admonished by the condition of the ironclads that a persistence in our efforts would end in disaster, and might cause us to leave some of our ironclads in the hands of the enemy, which would render it difficult to hold those parts of the coast that are yet in our possession. I have therefore determined to withdraw my vessels."

The Department and the people of the North counted confidently on the fall of Charleston through the monitors, as is shown by the orders of April 2d, followed before the receipt of the news of the repulse on April 7th by a letter to the Admiral from the Secretary of the Navy, dated April 11th, as follows: "It has been suggested to the Department by the President, in view of operations elsewhere, and especially by the Army of the Potomac, that you should retain a strong force off Charleston, even should you find it impossible to carry the place. You will continue to menace the rebels, keeping them in apprehension of a renewed attack, in order that they may be occupied, and not come North or go West to the aid of the rebels with whom our forces will soon be in conflict. Should you be successful, as we trust and believe you will be, it is expected that General Hunter will continue to keep the rebels employed and in constant apprehension, so that they shall not leave the vicinity of Charleston. *This detention of ironclads, should it be necessary in consequence of a repulse, can be but for a few days.* I trust your success will be such that the ironclads can be or will have been despatched to the Gulf when this reaches you. There is intense interest in regard to your operations."

The writer has italicised the sentence above, as it would exert a controlling influence on Admiral Dupont in fitting for effective service all of the ironclads under him with the least possible delay.

Immediately following is a despatch from the President:

EXECUTIVE MANSION, April 13, 1863.

Hold your position inside the bar near Charleston; or, if you have left it, return to it, and hold it until further orders. Do not allow the enemy to erect new batteries or defences on Morris Island. If he has begun it, drive him out. I do not herein order you to renew the general attack. That is to depend on your discretion or a further order.

A. LINCOLN.

To Admiral DUPONT.

The following day the President issued further instructions:

EXECUTIVE MANSION, April 14, 1863.

This is intended to clear up an apparent inconsistency between the recent order to continue operations before Charleston, and the former one to remove to another point in a certain contingency. No censure upon you, or either of you, is intended; we still hope by cordial and judicious co-operation you can take the batteries on Morris Island and Sullivan's Island and Fort Sumter. But whether you can or not, we wish the demonstration kept up for a time, for a collateral and very important object; we wish the attempt to be a real one (though not a desperate one) if it affords any considerable chance of success. But if prosecuted for a *demonstration* only, this must not be made public, or the whole effect will be lost. Once again before Charleston, do not leave till further orders from here. Of course this is not intended to force you to leave unduly exposed Hilton Head or other near points in your charge. Yours truly,

A. LINCOLN.

General HUNTER and Admiral DUPONT.

P.S.—Whoever receives this first, please send a copy to the other immediately.

On April 16th, Rear-Admiral Dupont wrote to the Secretary of the Navy as follows:

I have the honor to acknowledge the receipt this morning, by the Freeborn, of your communication of the 11th inst., directing the maintaining of a large force off Charleston, to menace the rebels and keep them in apprehension of a renewed attack in the event of our repulse.

The Department will probably have known, on the 12th instant, the result of the attack. In my despatch of the 11th instant, dated off Charleston, the Department was made aware of my withdrawal with the ironclads, from the very insecure anchorage inside the bar, and just in time to save the monitors from an easterly gale, in which, in my opinion and that of their commanders, they would have been in great peril of being lost on Morris Island beach. Their ground-tackling has been found to be insufficient, and from time to time they have dragged even in close harbors.

I have since been doing all in my power to push forward their repairs in order to send them to the Gulf, as directed, but I presume that your despatch of the 11th instant, and the telegraphic message from the President, revoke your previous order.

I shall spare no exertions in repairing, as soon as possible, the serious injuries sustained by the monitors in the late attack, and shall get them inside Charleston bar with all despatch in accordance with the order of the President. I think it my duty, however, to state to the Department that this will be attended with great risk to these vessels from the gales which prevail at this season, and from the continuous fire of the enemy's batteries, which they can neither silence, nor prevent the erection of new ones.

. . . . . .

I have deemed it proper and due to myself to make these statements, but I trust I need not add that I will obey all orders with the utmost fidelity, even when my judgment is entirely at variance with them, such as the order to re-occupy the unsafe anchorage for the ironclads off Morris Island, and an intimation that a renewal of the attack on Charleston may be ordered, which, in my judgment, would be attended with disastrous results, involving the loss of this coast.

. . . . . .

I am, however, painfully struck by the tenor and tone of the President's order, which seems to imply a censure, and I have to request that the Department will not hesitate to relieve me by an officer who, in its opinion, is more able to execute that service in which I have had the misfortune to fail—the capture of Charleston. No consideration for an individual officer, whatever his loyalty and length of service, should weigh an instant if the cause of his country can be advanced by his removal.

Chief-Engineer Alban C. Stimers was sent by the Department to look after and correct any deficiencies in the monitors which might be developed in service, and for this purpose he had under his control a number of skilled workers in iron. He was either the designer of the raft before described, secured to the bow of the Weehawken, or was closely connected with its construction. He witnessed the attack of the 7th of April from beyond the bar, and had recommended the employment of two rafts that he had brought down, one of which was attached to the bow of the Weehawken. Each raft was designed to carry on its forward end a submerged torpedo to destroy by explosion any obstruction met with; the torpedo Captain Rodgers declined to carry, *as he feared blowing up some of the other monitors against which he might run by accident.* Stimers, however, states that his explanation as to the safety of the vessels carrying the torpedo was not satisfactory, and for that reason they had rejected "this powerful weapon, for which we have every reason to suppose the enemy was entirely unprepared, in an attack which could have few hopes of success without it."

He was agreeably disappointed the following morning, upon his inspection of the monitors, to find "that there were no clear passages through the decks, and no penetrations through the sides of the vessels or the pilot-houses." He then institutes a comparison between the vulnerability, as he supposes, of the plates of 4½ inches in thickness of the New Ironsides and the five 1-inch plates applied to the sides of the monitors. He says: "To the casual observer, therefore, the solid plates will have the appearance of having withstood the bombardment better than the laminated, but the unprejudiced engineer will perceive the latter disposition of the metal is much the more effective in attaining the desired end." The falsity of this presented observation of the effect

of shot on laminated plates as compared with their effect on a solid plate of equal thickness has been established uniformly, by very many target experiments, and afterward by the Ironsides herself.

In his report to the Department he adds: "In consideration of the vast importance to our country that the stronghold of rebellion should be reduced, I take the liberty to express to the Department my firm opinion that the obstructions can be readily passed with the means already provided, and our entire fleet of ironclads pass up successfully to the wharves of Charleston, and that the monitor vessels still retain sufficient enduring powers to enable them to pass all the forts and batteries which may be reasonably expected."

The official history of Chief-Engineer Stimers in relation to monitors closes as follows: "Chief-Engineer Stimers is responsible for the detailed drawings of the [21] light-draught monitors, and for the calculations as to their displacement. It was expected that they would not draw over six and one-half feet of water, and be out of water amidships about fifteen inches. The contracts were made generally in the spring of 1863, and the vessels were to be furnished in the fall of that year. . . . The Chimo, at Boston, was the first one finished. She was under the entire direction of Chief-Engineer Stimers. Instead of being fifteen inches out of water she was only three inches on an average, showing a miscalculation of one foot. The Department immediately removed Mr. Stimers from the position of general superintendent, and placed the question of what should be done to remedy the difficulties occasioned by his error in the hands of Rear-Admiral Gregory, Chief-Engineer Wood, and Captain Ericsson" (letter of Assistant Secretary of the Navy, December 15, 1864, to Joint Committee on the Conduct of the War, vol. 3, 1865).

## CHAPTER VI.

### THE MONITOR CLASS OF VESSELS.

THE reader is probably already informed that the raising of the hull of the old frigate Merrimac, at Norfolk, and placing an iron casemate upon it, created a very general alarm among the people of the North, and brought into prominence the grave question as to how that vessel could be successfully met or destroyed. The destruction of the sailing vessels Congress and Cumberland intensified the alarm, and at the same time afforded painful instances of the impotency of sailing frigates, armed with small smooth-bore guns, when an adversary plated with iron, though improvised and imperfectly constructed, so readily effected their destruction.

A vessel designed by Captain John Ericsson, named the Monitor, was built in great haste for the purpose of meeting the Merrimac. Her construction gave rise to that of a class known as "monitors," seven of which were sent to Port Royal, as soon as they could be built and equipped, for the purpose of operating against Charleston. At the time they were supposed to be if not invulnerable under the fire of the guns then in use in the forts defending Charleston, at least less liable to destruction. In relation to the effective working of their batteries no doubt existed, or was expressed by any one.

As these vessels have had their day and will pass out of the knowledge of the reader in coming years, it seems worth while to give a particular description of them.

Afloat, in appearance they were not inaptly likened to a cheese-box on a plank. The hull itself, even if freed from the overhang, could not as a model have any pretension to speed. The dimensions of the Passaic, the first vessel built of the improved class, were as follows: Apparent length of vessel, 200 feet; beam, 45 feet. This was sustained by an iron hull with nearly a flat floor, 16 feet shorter at the bow, and 25 feet shorter at the stern than the deck measurement, and on a cross section at the turret, 37 feet 8 inches wide. The usual draught was something over 11 feet, and displacement 844 tons. The thickness of the mass of wood firmly bolted together that surrounded the hull proper was 5 feet and was plated externally with five 1-inch iron plates.

The turret had a thickness of eleven 1-inch plates, with a height of 9 feet, and an interior diameter of 20 feet. It was designed to revolve at will by suitable machinery; had iron beams on top to support a light iron cover, and was surmounted by a small cylindrical tower (pilot-house) composed of eight 1-inch plates, some 7 feet in height and 8 feet in diameter. Within this pilot-house was the wheel, and in battle, the commanding officer, the pilot, and the helmsman. It was capped by a circular plate of iron 1½ inch thick. Small circular holes were originally cut through for vision, and afterward, as a necessity, they were chiselled out to give an angle to the view. The plates of the turret and of the pilot-house were held together by numerous bolts, with the heads on the outside and a nut within. The blow of a very heavy projectile would make the nuts fly with great force within the turret, and the rebound of the plates would then at times withdraw the bolts entirely, but more frequently they would stand out like the "quills upon the fretful porcupine."

The hatchway over the windlass-room, another forward of

the turret, and a third over the engine-room, were covered with iron plates and calked on going to sea, and on going into action were put on, leaving no egress from below except through the turret. For ventilation, six holes of 8 inches diameter were cut through the deck forward and four aft, and ventilating pipes 4 feet high were fitted with gaskets to keep out the water; beneath were bull's-eyes that could be screwed up below to exclude the water when the pipes were taken off.

Forward of the hull proper, in the "overhang," was what was known as the "anchor-well," a cylinder into which a four-armed anchor could be hove up by means of a windlass in a small apartment called the "windlass-room" in the bow, the chain passing in through a hawsehole less than two feet above the ordinary water level. The anchor-well had a removable plate over it, as also had what was known as a "propeller-well," some fifteen feet from the stern. The turret was nearly, if not quite, on the centre of the vessel, and the smoke-stack, made of eight 1-inch plates to a height of 6 feet above the deck, and then of the usual height with the ordinary thickness of iron, was 12 feet farther aft. The deck itself was of heavy wood and covered with two ½-inch plates of iron. When ready for sea and properly trimmed, the bow would usually be 2½ feet, and the stern a foot less above the water level. With a perfectly clean bottom, a speed somewhat in excess of seven knots was attainable. Lying in the warm salt water of Southern ports soon caused the bottom to foul in the most extraordinary manner, and reduced the attainable speed to less than four knots.

The armament intended was two XV-inch guns, but owing to inability to obtain them in time, one of that calibre was given and one XI-inch gun, fitted with a "yoke," as before

described. Instead of this gun the Patapsco and Lehigh had 150-pounder Parrott rifles.

It is apparent to the reader that it would require only a foot or so of water in the hold to sink this vessel, and this danger was augmented by the insufficient water-way, which was the trough within the keel, having a chord of 16 inches, and a depth of 3¾ inches, in the form of a lunette. When the vessel was nearly on an even keel this was a very insufficient conduit from the fore body of the vessel to the powerful centrifugal pumps placed in the after body, as we shall presently see in the sinking of the Weehawken.

In a heavy sea the monitors were surprisingly easy in their movements. This was obtained at the cost of great strain on the fastenings of the "overhang." When the engines were stopped the vessel, quite unlike ordinary ones, would sheer one way or the other, and no amount of watching could prevent this. As we have already seen, the gun machinery had not that reliability that it was supposed to possess. When under a fair steam-pressure they steered very well.

In May, 1863, in answer to the requirement of the Navy Department, all of the officers commanding monitors near Charleston (five in number) submitted their opinion in relation to the qualities of that class, which the Department did not think worth while to give to the public in its "Report on Armored Vessels," 1864, made under a Congressional resolution. It might be supposed that this letter had been inadvertently passed over, had it not been that on page 603 Captain Ericsson comments upon one of its paragraphs. Captains Drayton and Worden subsequently saw the letter, and concurred in its contents. It has never been published, and for lack of space is not now given. The closing paragraphs are as follows: "In relation to the qualities of the vessels, we would remark that they have been exaggerated

into vessels capable of keeping the seas and making long voyages alone. Some of us have been in heavy gales in them, and, indeed, from the amount of water in them, have had grave apprehensions of their loss. . . .

"Possessing the advantage of a secure harbor and choosing their time of exit, these vessels can, in our opinion, greatly harass a blockading force, making it necessary for wooden vessels to withdraw to such distances from the entrance of the harbors, especially after night, as would make the blockade very ineffective against the entrance of steamers.

"The average time required to load, point, and fire the XV-inch gun does not vary much from seven minutes. It must be remembered that this controls the fire of the lighter piece, or if that be fired oftener, it retards further the slow firing of the heavier gun. We regard a small calibre with a larger proportional charge of powder as desirable, at least when used against brick or stone."

It is necessary to add that the opinion was expressed by the same officers that the monitors could not ride securely to their anchors within the bar off Charleston. This grew out of the fact that several of the vessels had dragged in very moderate weather and not strong tides within Edisto inlet. This opinion, however, was found erroneous; the force of a heavy sea was expended in a great measure on the bar, and the monitors continued within it off Charleston for some twenty months. Heavy moorings, with buoys attached, were put down for them, which ensured their safety so far as dragging was concerned.

Another fitment, however, was necessary to enable monitors to be habitable in that locality. This was the placement of high coamings around the hatchways, so as to allow the battle-plates to be left off, except when going into action, or

when a heavy gale set in from seaward. Without this arrangement it would have been absolutely impossible to exist on board of them, as the water was usually swashing over the decks. Admiral Dahlgren did not exaggerate when he said "no one can form an idea of the atmosphere of these vessels" after being closed up and in action for a few hours in a hot climate.

The New Ironsides fairly fulfilled reasonable expectations; she had all the speed necessary for the purposes of her construction; was not an indifferent sea boat; presented in broadside seven XI-inch shell guns and one 200-pounder rifle. Her battery had rapidity of fire and great precision and usefulness within its range. When in shallow water, like all flat-floored vessels, she steered badly and became unmanageable, if obliged to slow down or to stop the enginery. The armor plating was four and a half inches in thickness, and stood fairly the fire from all the batteries to which she was exposed at all times. Before going into action her deck was covered with sand-bags, and the iron bulkheads of four inches in thickness at her ends were reinforced with sand-bags.

The Keokuk proved to be a hopeless failure under the fire to which she was subjected, and would not have withstood projectiles of ordinary size at any distance at which her battery could have been used effectively. The contract calls for "one iron-clad, shot-proof, steam battery on Whitney's plan, the vessel to be wholly of iron. Length, 159 feet; beam, 39 feet; depth of hold, 3½ feet, and draught, 8 feet. . . . The said vessel shall have capacity and stability safely to carry and work a battery of two XI-inch guns, . . . the vessel and the two turrets and the pilot-house to be shot-proof against ordnance used in the naval service of the United States." The "turrets," as they were called, were

two oval casemates. The above comprises all that the contract calls for, so far as invulnerability is concerned, and no mention is made of her in this regard, or of her qualities in the report on "Armored Vessels," 1864. So far as memory serves, the "armor-plating," as it was called, was one and a half or two inches thick, and an inner skin of perhaps three-fourths of an inch. Her rôle was short, and she would not have proved a success anywhere, whether against forts or ships.

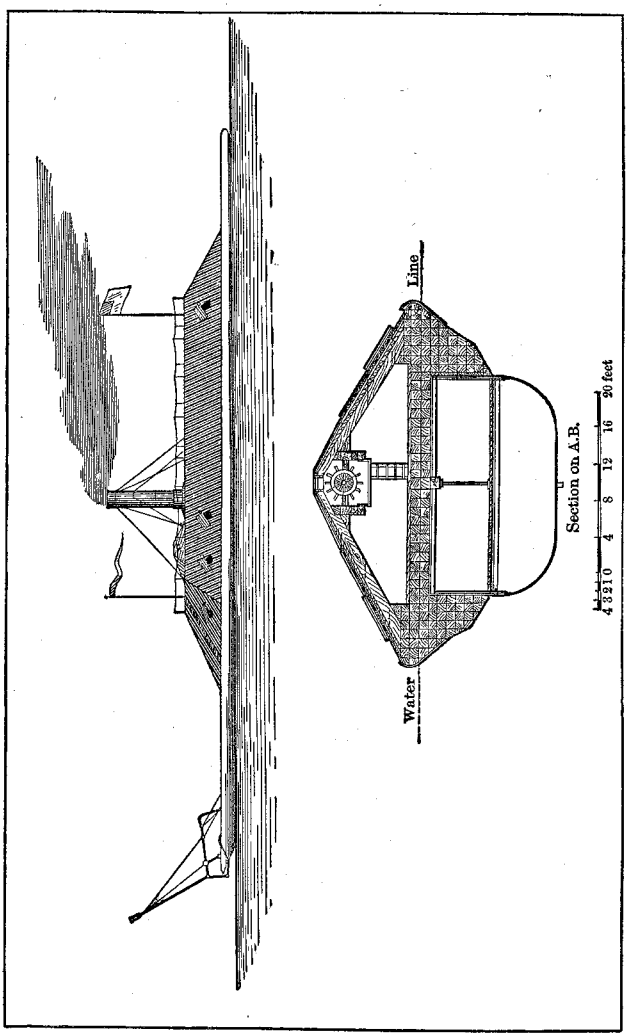
By April 13th all of the monitors had been sent to Port Royal for repairs, and as fast as finished were sent to North Edisto, the inland waters of which were contiguous, and actually afforded a better base for menacing or taking Charleston than Morris or Sullivan's Island. Had both of these islands been in possession of the National forces, Charleston would certainly have been a sealed port, but so far as its attack from a land force was concerned, even then an approach from Stono and North Edisto would have been more practicable, considering the support derivable from guns afloat. The admiral had reason to suppose that at any day the monitor force, with the exception of two vessels, would be ordered to the Mississippi, and so it was held in expectancy.

Definite information was obtained of the approaching readiness of the ram Atlanta to leave Savannah, with the intention of sweeping the coast of the weak vessels that for the most part maintained the blockade. The vessel was reputed strong. Timely provision was made to meet her by sending the monitors Weehawken, Captain John Rodgers commanding, and Nahant, Commander John Downes, to Wassaw Sound, from whence she was expected to come out.

The admiral had the satisfaction of reporting to the Department on June 17th the capture of the Atlanta on that

day. At early dawn she was discovered coming down Wilmington River, accompanied by a propeller and a side-wheel steamer. The Weehawken and Nahant slipped their cables and steamed outward for the northeast end of Wassaw Island; the ram and her consorts steamed down rapidly, apparently thinking them in retreat. After preparations were completed and broad daylight had come, at 4.30 the Weehawken and Nahant turned and stood up to meet their adversary. At a distance of a mile and a half the Atlanta fired a rifle shell, which passed over the stern of the Weehawken and struck near the Nahant. She then laid across the channel and awaited an attack. At a distance of about three hundred yards the Weehawken opened fire, and after an engagement of fifteen minutes, at 5.30 A.M., having fired but five shots, the Atlanta hauled down her flag. The Nahant had not the opportunity of delivering a single shot, although close aboard and ready to support her consort.

The Atlanta had gone aground after the action was over. A rising tide soon enabled her to be got afloat and sent with a prize crew to Port Royal. Four shots had struck her. A XV-inch cored shot had struck the casemate at an angle of about fifty degrees with the keel, broken in the armor and wood backing, covered the deck with splinters, and from the concussion and débris prostrated 40 men. Another of the same size struck the top of the pilot-house, knocking it off, wounding the pilots, and stunning the men at the wheel. An XI-inch solid shot struck the edge of the overhang, breaking the plating; the fourth, supposed to be of the same size, struck a port-stopper in the centre, breaking it in two, and driving many of the fragments into the casemate. The crew was composed of 21 officers and a complement of 121 enlisted men, 16 of whom were wounded. The captured officers estimated her speed at ten knots, and regarded the




Confederate ironclad Atlanta, captured in Wassaw Sound, June 17, 1863.

Atlanta as the strongest ironclad of the Confederates, and quite a match for the two monitors.

Confident and enthusiastic friends on board of the two steamers that had come from Savannah to witness the triumph of the Atlanta, saw instead, their pride and their hope in the possession of the enemy. They certainly had not long to wait, and, however painful the suspense, it was of short duration.

The armament of the Atlanta was two VII-inch and two VI$\frac{4}{10}$-inch rifled guns, two of which could be pivoted either on broadside or ahead and astern. Length of vessel, 204 feet; extreme breadth, 41 feet; draught, 16 feet. A more detailed description will be found in the volume of Professor Soley. The superstructure was built on a staunch new steamer known as the Fingal, with excellent enginery. The plating was four inches in thickness, composed of two plates, but of little tenacity, as it shattered almost like cast-iron.

Chronometers and other nautical instruments found on board disclosed the fact that the builders intended the vessel for sea purposes, and the boldness of her commander indicated the belief that she was far superior to any of the rams in Charleston Harbor.